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# Research Update

## Institute for Clinical and Epidemiological Research

Volume IV, No. 3

A Veterans Affairs Center of Excellence

Fall 2001

### Ronnie D. Horner, Ph.D., Leaving HSR&D and ERIC

Ronnie D. Horner, Ph.D., Director, Epidemiologic Research & Information Center (ERIC), and Associate Director, Durham HSR&D, will be leaving at the end of January 2002. At this time, he will become the director of the Program in Health Disparities Research, a congressionally mandated program that will be a part of the National Institute of Neurologic Disorders and Stroke (NINDS) in Bethesda, Maryland.

Dr. Horner is originally from Ohio, where he received a B.S. in social relations and an M.S. in sociology from the University of Toledo. He received an M.S. in preventive medicine and a Ph.D. in epidemiology from Ohio State University, where he also worked as a research associate. He was an epidemiologist for a brief period at the Battelle Memorial Institute in Columbus, Ohio, before accepting a position at East Carolina University School of Medicine in Greenville, N.C. He was there for five years, where he was an assistant professor of medicine and an associate section head in the Research Section, both for the Department of Family Medicine.

Dr. Horner began his distinguished career with the VA in July 1990 as a senior health scientist, when HSR&D was under the directorship of Dr. John Feussner (M.D., M.P.H.), and as an assistant research professor in the Division of General Internal Medicine at Duke University. His research focus was cerebrovascular disease.

Upon his arrival to the Durham VA, however, Dr. Horner's research interests began to expand. "My interests mainly expanded when I started doing stroke studies relating to health care usage where we looked at racial differences," says Dr. Horner. "My studies focused on racial differences and various aspects of stroke, such as its treatments and outcomes."

"More recently I've broadened out to other neurological disorders. Other areas in which I have interest, but haven't yet begun, are neurologic complications related to diabetes, and the treatment of pain, among others."

Dr. Horner became the associate director of the Center for Health Services Research in Primary Care in November 1995. In June 1996 he became the interim director after Dr. Feussner left to become the chief research and development officer for HSR&D and before Eugene Oddone, M.D., became director one year later. It was at this time, in 1996,

that Durham received funding for, and Dr. Horner became director of, the Epidemiologic Research and Information Center. He was appointed a research professor of medicine, Division of General Internal Medicine, Department of Medicine, Duke University Medical Center, in March 2000. Since he began here more than eleven years ago he has been the principal and co-principal investigator of numerous studies and has authored dozens of articles and papers.

Dr. Horner thinks that his experiences with HSR&D and the ERIC have been crucial to his professional development and have well prepared him for his new position with NINDS. "Professionally I really grew here by being involved in funded research in my areas of interest. I've been able to advance through the professional ranks, and become a full professor at Duke University. I never thought I'd be here for more than two years. I've also learned how to administer programs, which will be essential for my work with NINDS."

However, working with junior faculty has been an element of his experience with HSR&D that he found the most satisfying. "Being able to bring junior faculty along, that's probably what I'm most proud of. Working to get them published, to get them to be funded investigators, to help them learn to work at achieving a higher level -- that's been the most pleasing to me," says Dr. Horner.

Some of the changes he's seen have been gratifying as well. "One of the most remarkable changes is that there is substantially more funding and more funded investigators. When I first came here there were relatively fewer investigators who were principal investigators. Now, many more junior faculty are funded and moving forward in their careers, and that's a nice development."

Dr. Horner looks forward to the challenges that lie ahead with the Program in Health Disparities Research. "I'll be involved in helping set the national agenda for how health disparities research will be undertaken in the areas of neurologic disorders and stroke. I'll be located in the Office of the Director of NINDS. Most of the institutes within the National Institutes of Health -- I think there are about twenty of them -

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**HSR&D Center of Excellence in Primary Care • Epidemiologic Research and Information Center  
Women's Health Research Program • Program on the Medical Encounter & Palliative Care**

- have a program in health disparities, just like they have a program in minority health. The idea is to meet a presidential mandate set by President Clinton in 1998 to move the nation towards reduction, and ultimately elimination, of disparities in health."

"Health disparities research has traditionally focused on race and ethnic differences," says Dr. Horner, "but we need to think more broadly and include disparities that might be related to socioeconomic class, gender, and geographic residence. There are clearly economic differences. People of lower income strata tend to have more disease and illness, and worse outcomes. There are also differences based on geographic residence, such as in the inner city and in rural areas. There are gender disparities as well."

"The focus of the program will be up to me and I intend to focus on prevention and intervention, more than documenting that problems exist, as has historically been done. We essentially know that the problems exist. Now we need to intervene and see some impact, to reduce the disparities and hopefully some day eliminate them. To achieve that goal, we've have to identify the points and types of interventions that will be successful, and that's where the research will come into play. My programs will be focused on these aspects."

Reflecting on how his experience with HSR&D and as director of the ERIC has prepared him for his new position, Dr. Horner says it's prepared him in a number of ways. "First of all, my skills as an administrator were developed here. I've learned what goes into running a successful program. It also allowed me to figure out that administration is what I want to do."

He said that realizing this was fundamental. "You've got to really want to do administration. Putting the pieces together to see something achieved is what I found most enjoyable as interim director in 1995 and 1996. And I learned that bringing the pieces together was actually something I wanted to do on a broader basis."

"Another aspect of working on some of my projects, particularly the ALS study, is that they gave me experience in dealing with high visibility programs. This will be very helpful in the Health Disparities Research program because it will have high visibility to Congress; they want to see programs that are having an impact. The ALS study, because it had a political element to it, helped me see the importance of the political side of research. I learned a lot about what to do and what not to do. In my new position, I have to have some political skills and be able to work within that arena, and for that, my experience here has been very useful."

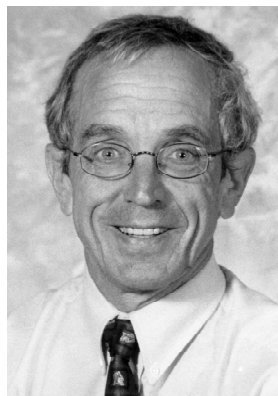
The largest study that ERIC undertook was the ALS (Amyotrophic Lateral Sclerosis). Though he's not able to discuss the results at this time, Dr. Horner feels that has been his most intriguing study and the most important one with which he has been involved. He feels it's important because, "ALS is a disease of unknown origins. For some cases we know there is a genetic component. But for most cases of ALS, the cause is really unknown. That leaves us with the chance to find the cause of this disease. It's a rare disease, a profound disease, so this is a real opportunity to contribute to scientific knowledge."

Overall, Dr. Horner thinks the Durham HSR&D has been an excellent place to work and grow. "The current program is set up in such a way that it will continue to be successful. You have good investigators here, bright people who are dedicated to their research. I'm looking forward to hearing about the new successes of HSR&D while I'm up in Washington."

## Morris Weinberger, Ph.D., Joins Durham Faculty

The Center would like to welcome Morris Weinberger, Ph.D., as a new faculty member. Dr. Weinberger is the Vergil N. Slee Distinguished Professor of Healthcare Quality Management in the Department of Health Policy and Administration at the University of North Carolina at Chapel Hill as well as a VA Research Career Scientist Awardee. Dr. Weinberger's research focuses on improving the delivery of primary care among patients with chronic illness. He also is involved in developing, implementing, and evaluating pharmaceutical care programs.

Dr. Weinberger, however, is not new to the Durham VA. He was associate director of Durham's Center for Health Services Research in Primary Care from 1989 through 1993, and served as its acting director in 1994. In that same year, he became director for the Center for Health Services Research at the Roudebush (Indianapolis) VA Medical Center. There, the focus of his research was on how to deliver care more effectively in the primary care setting. "This usually involved non-physician providers in some way," said Dr. Weinberger. "The second area within the primary care setting that we examined was whether providing physicians with better information about their patients would change physicians' management decisions." He plans to continue these lines of research at the Durham VA.



As a faculty member in UNC's School of Public Health, Dr. Weinberger would also like to foster collaboration between UNC and the Durham VA Center for Health Services Research in Primary Care. "An increase in collaboration can strengthen the quality and scope of research at both the VA and UNC," says Dr. Weinberger. "There are numerous ways such collaboration can occur. It can involve joint projects among faculty; UNC faculty working with VA investigators on VA databases; UNC graduate students doing their dissertations using VA data; and training of post-doctoral fellows. One of my specific goals is to try to strengthen that relationship. We have begun to explore strategies to achieve that goal."

Dr. Weinberger received his B.A. in sociology and mathematics, graduating with honors, from the State University College of New York at Cortland in 1974. He received his M.S. and Ph.D. in sociology from Purdue University, graduating in 1978. He was an assistant and an associate professor at Indiana University School of Medicine from 1978 through 1989. He was a associate medical research professor at Duke's Department of Medicine from 1989-1994. During his tenure as the director of the Center for Health Services Research at the Indianapolis VA, he was also a professor of medicine at the Indiana University School of Medicine.

Dr. Weinberger is the recipient of numerous honors and awards and has participated in a number of professional organizations and societies, including the Academy for Health Services Research and Health Policy, the Gerontological Society of America, and the Society of General Internal Medicine. He is the author and co-author of numerous articles and abstracts.

## Seeking Ways to Improve Veteran's Blood Pressure Control

Hypertension is a major modifiable risk factor for heart disease and stroke, the first and third leading cause of death, respectively, in the United States. There are over 8.5 million veterans (approximately 40 percent of all veterans) among the approximately 50-60 million Americans who have hypertension, a disease that imposes an enormous financial burden in direct and indirect healthcare costs. Despite the risks of hypertension, less than 30 percent of all patients nationally have their blood pressure under effective control.

A group of researchers at the Center for Primary Care Research in Health Services Research at the Durham VA would like to improve these blood pressure rates. Drs. Eugene Oddone (M.D.) and Hayden Bosworth (Ph.D.) have started a study, titled "Study to Lower Veterans' Blood Pressure: Patient/Physician Intervention (IIR 20-034)," to improve blood pressure control among veterans. The study simultaneously tests both a patient and a physician intervention. This four-year clinical trial will enroll 544 patients with hypertension seen at the Durham VAMC primary care clinic and follow them for two years.

Drs. Oddone and Bosworth believe that an effective intervention to improve blood pressure control requires a systematic approach. "We are using the Health Decision Model as our theoretical framework to evaluate the effectiveness of a tailored patient health education and behavioral intervention to improve blood pressure control in hypertensive patients. This will be in conjunction with a provider-directed intervention for monitoring and managing blood pressure," says Dr. Bosworth. "To our knowledge, this study is the first to combine both patient and provider interventions to enhance veterans' blood pressure control."

"Based upon previous work, patient factors, such as literacy, memory, hypertension knowledge, and side effects were determinants of blood pressure control in hypertensive veterans. It was also clear that given the multiple factors related to blood pressure control, an intervention tailored to each person's needs was required."

The patient intervention is administered by a nurse, via the telephone, once every 8 weeks for twenty-four months and will be tailored for patients with problems with literacy, memory, hypertension, knowledge, social support, side effects, patient/provider communication, pill refill, and lifestyle behavior, such as smoking, diet and alcohol use.

"You may have an illiterate hypertensive patient with a memory problem who doesn't know much about hypertension, but they have family or a social support network and they get along well with their provider. In this case the nurse case manager will provide tailored information for an illiterate person, provide memory suggestions, and educate the patient on specific risks associated for a person with high blood pressure. Our hope is that by tailoring the patient intervention to patients' needs we will improve the proportion of veterans with controlled blood pressure," says Dr. Bosworth.

Mary Goldstein, M.D., M.S., an HSR&D career development research associate at the Palo Alto VA Medical Center and an associate professor of Medicine at the Center for Primary Care and Outcomes Research, Stanford University School of Medicine, is a co-investigator on this study as well. She and her colleagues developed a provider intervention that will be used in the current Durham study. Dr. Goldstein's provider intervention includes an electronically generated hypertension decision support system delivered to the provider at each patient's visit. The decision support

system includes a compilation of each patient's blood pressure readings over the last 12 months, highlighting those  $\geq 140/90$  mm/Hg based on all primary care clinic visits. The decision support system also includes a list of the patient's active anti-hypertensive medications, current dose, last fill, and maximum suggested dose. Providers are reminded to take action based on JNC VI and VA guidelines. The provider intervention is designed to improve guideline concordant therapy.

Controlling blood pressure is designated as a high priority in VA patient care. "Elevated blood pressure is one of the most common reasons for veterans to visit a VA primary care clinic," said Dr. Bosworth, "and investigators have shown that improving hypertension diagnosis, treatment, and control levels will lead to further declines in cardiovascular and stroke incidence and mortality. This study is an important step in defining both a provider and a patient intervention to improve blood pressure control among veterans."

## Durham VA to Test Behavioral Insomnia Therapy

Jack D. Edinger, Ph.D., a senior psychologist for the Durham VA's Mental Health Service Line, would like to determine the effectiveness of cognitive-behavioral therapy (CBT), a psychotherapeutic intervention that focuses on dysfunctional thinking and behavior, for reducing the clinical symptoms and the accompanying long-term negative affects of chronic, primary insomnia. Chronic, primary insomnia, a long-term inability to sleep in normal circumstances, is a widespread and debilitating sleep disorder that reduces the quality of life, increases the risk for other illnesses, and contributes to increased health-care costs for affected individuals. Insomnia affects 10 to 15 percent of the general population and among the veteran population it may be higher.

Dr. Edinger, the principal investigator of this four-year HSR&D-funded study, "Behavioral Insomnia Therapy in Primary Care (IIR 00-091)," predicts that patients who receive cognitive-behavioral therapy will show improvements in their sleep and quality of life, as well as general health improvements and overall reductions in healthcare utilization. "I've been involved in behavioral insomnia treatment for a number of years and have found this treatment to be effective with patients suffering from primary insomnia," says Dr. Edinger.

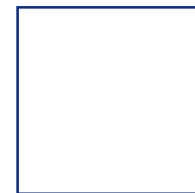
Primary insomnia is not caused by a psychiatric, medical, or a co-morbid substance abuse problem. "It's an insomnia which has its own natural history. It usually has an onset during a time of stress or disruption from one's normal sleep-wake pattern, and subsequently develops a life of its own through the emergence of a number of perpetuating factors, many of which are the patient's self-derived strategies for coping with it," said Dr. Edinger. "If the person has a bad night's sleep, they might sleep in the next day or they might take daytime naps to catch up, or they may spend excessive time in bed. All those strategies worsen the problem of keeping them up."

Traditionally, those who seek treatment for chronic insomnia are given medication that often provides only short-term relief from symptoms. Unlike medications, CBT is designed specifically to eradicate underlying dysfunctional beliefs about sleep, such as unrealistic sleep expectations and sleep-related performance anxiety,

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and dysfunctional sleep behavior, such as daytime napping and erratic sleeping and waking schedules. This will be achieved through sleep education and cognitive restructuring. “Researchers have found this to be a pretty consistently effective treatment,” says Dr. Edinger. “In recent years we’ve had the opportunity to use it clinically in treating our veteran primary care patients. Some of these patients have multiple co-morbid conditions as well as insomnia, and I’ve been pleasantly surprised to see how well they’ve responded to this treatment.”

Patients enrolled in the study will have active sleep problems. “We’re not going to do any manipulation of medications outside of what the physician recommends for the patient. We’ll be working with patients for whom medication is not sufficient,” says Dr. Edinger. “We think that adding cognitive-behavioral therapy will provide some additional treatment benefits. I suspect that there will be some patients that will be motivated to lessen their medications or discontinue them entirely.”

Though several studies have shown that CBT can produce impressive short- and long-term improvements in sleep patterns for insomnia sufferers, its effectiveness for reducing clinical symptoms such as sleep disturbance with its accompanying poor mood, improving overall quality of life, and reducing healthcare costs is yet to be tested.

“Our study findings should provide important new information about managing both the sleep problems and overall health care

utilization patterns of veteran insomnia sufferers present in VA primary care settings,” says Dr. Edinger. “If CBT-treated patients show substantial reductions in their VA inpatient/outpatient utilization, this finding could have important quality of life implications for our veterans, as well as important cost-savings implications to the VA system.”

Dr. Edinger received a B.A. in psychology from Lafayette College and his M.S. and Ph.D. in psychology from Virginia Commonwealth University. He began his career with the Durham VA Medical Center in 1980 as a staff psychologist. In addition to being a senior psychologist for the Durham VA, he is also a senior fellow for the Durham VA Health Services Research and Development, a senior fellow at Duke University for the Study of Aging and Human Development, a clinical professor for the Department of Psychiatry at the Duke University Medical Center, and a staff member of Duke University’s Sleep Disorders Center.

### **Recent Faculty Publications**

OLSEN MK and Schafer JL. “A Two-Part Random-Effects Model for Semicontinuous Longitudinal Data” Journal of the American Statistical Association 2001 (June); 96(454):730-745.

Koons CR, Robins CJ, Tweed JL, Lynch TR, Gonzalez AM, Morse JQ, Bishop GK, BUTTERFIELD MI, BASTIAN LA. “Efficacy of Dialectical Behavior Therapy in Women Veterans With Borderline Personality Disorder” Behavior Therapy 2001; 32:371-90.

**Research Update** is published quarterly by the Health Services Research and Development Service, Department of Veterans Affairs Medical Center, Durham. For questions or comments contact Ed Cockrell, Administrative Officer, VAMC (152), 508 Fulton Street, Durham NC, 27705. Telephone: (919) 286-6936, Fax: (919) 416-5836. E-mail: COCKR001@mc.duke.edu Web Page: <http://hsrd.durham.med.va.gov/>

The Institute’s mission is to provide quality information on issues regarding the organization, financing, and delivery of veterans’ health care, and to build the epidemiological capacity of the Veterans Health Administration through the generation, synthesis, and dissemination of epidemiological information. The Institute also has a mission to educate health professionals through a spectrum of training grants in the techniques of health services and epidemiological research.